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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/903,201
Filing Date: July 10, 2001
Appellant(s): MONTIERTH ET AL.

David Millers
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/31/2005 appealing from the Office action mailed 5/31/2005.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,753,903	Lin	6-2004
6,747,752	Farago	6-2004
5,872,945	Wett	2-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1 – 6 and 10 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (US 6753903) and Farago (US 6747752).

Regarding claim 1, Lin teaches **for a peripheral** (Fig. 1 ref. no. 3) **that during normal operation** (during normal operation, the camera provides picture data to be printed), **connects to a host computer** (camera 2 acts as a host computer by providing data to be printed by the printer and is connect through the cable 1 to the printer 3) **through a cable containing a controller** (cable 1, 4, 5, that contains controller 11), **a demonstration system comprising:**

a controller (controller 11, discussed in col. 3 lines 7-20) **of a type employed in the cable that connects the peripheral to the host computer during normal operation** (controller 11 controls the overall functions of 1 and thus including the operations the adaptor performs in the normal operation, such as described in col. 1 lines 45-50); **and**

a memory that is external to the peripheral (removable memory 13), **contains data, and is coupled to the controller to enable the controller to read the data from the memory** (see functional lines in Fig. 1 coupling memory unit 13 with controller 11, wherein the controller can read data from the memory as discussed in col. 4 line 14) **for the peripheral to perform without being connected to the host computer** (col. 3 lines 22-29, col. 1 lines 52-57, col. 5 lines 13-18 teach transferring data from the external memory device instead being connected to host computing device 2 – see note above for computing device 2).

While Lin teaches a peripheral controlling system for use without a host machine, Lin does not specifically teach the memory to contain **demonstration data for controlling the peripheral to perform a demonstration.**

Farago teaches a peripheral controlling system for use without a host machine including a memory containing **demonstration data for controlling the peripheral to perform a demonstration** as discussed in col. 2 lines 50-67 and shown in Fig. 1.

It would have been obvious to one of ordinary skill in the art to add the demonstration data for performing peripheral demonstrations of Farago into the peripheral controlling system of Lin to provide a system where a cable could control the printer alone or the printer could be controlled by the host through the cable. The motivation for doing so would have been to provide a salesperson more options in demonstrating products. For example, if space or mobility is an issue, a memory card can be loaded in the cable of Lin and the peripheral can be demonstrated. Alternatively, if the salesperson had a lot of data and printing options they wanted to show off, there could be too much data for a memory card to contain or too much functionality for the cable controller to compute. In such a case a host computing device would be desirable in the demonstration of peripherals and the cable could just be used for data transfer and formatting.

Note: The applicant states: 'a cable containing a controller' thus defining a cable as cable (a bound or sheathed group of mutually insulated conductors) + functional circuitry. Lin teaches cables 4 & 5 containing adaptive circuitry 1. Therefore, the cable + functional circuitry of Lin as well as other cables + functional circuitry read on applicant's described definition of a 'cable.'

Regarding claim 2, which depends from claim 1, Lin further teaches the **peripheral is a printer** (Fig. 1 ref. no. 3).

Regarding claim 3, which depends from claim 2 as it depends from claim 1, Lin further teaches that:

the controller in the cable operates to format data from the host computer for a print operation of the printer (controller 11 utilizes format controller 10 as shown in Fig. 2, wherein data coming from the computing device 2 is formatted and sent to the printer 3 as discussed in col. 3 lines 49-52); **and**

the controller in the demonstration system operates to format data from the memory as required for the print operation of the printer (controller 11 utilizes format controller 10 as shown in Fig. 2, wherein the DMA controller 27 receives information from the memory 13 and the format controller 10 formats and sends said information to the printer 3 as discussed in col. 5 lines 13-19).

Regarding claim 4, which depends from claim 1, Lin further teaches

a connector having a pin layout for connection to the printer (Fig. 1 printer port 15 connects to the printer via connector cord 5);

a first enclosure containing the controller (as symbolized by the dotted line around adaptive controller unit 1); **and**

a second enclosure containing the memory (removable flash memory is known to have a plastic casing enclosure around the memory cells for protection).

Regarding claim 5, which depends from claim 4 as it depends from claim 1, Lin teaches that **the connector, the first enclosure, and the second enclosure are substantially identical to matching elements of the cable that connects the peripheral to the host computer during**

the normal operation as evident from Fig. 1, wherein the same components are used for both normal operation and just utilizing the external memory.

Regarding claim 6, which depends from claim 1, Lin teaches the memory to be flash memory, which is **non-volatile memory**.

Regarding claim 10, which depends from claim 1, Farago further teaches that **the external memory further comprises demonstration code that the controller executes.** Executable code is included to instruct the controller to perform formatting and sending of the data to the peripheral. This code is stored in programmable memory 1 shown in Fig. 1 along with other program code for controlling the printer demonstration as discussed in col. 2 lines 50-55.

Regarding claim 11, the structural elements of Lin and Farago teach the method steps of claim 11 as shown in the rejection of claim 1 and further discussed here. Lin and Farago teach:

connecting to the printer a cable containing a controller that is of a type used in a printer cable that connects the printer to a host computer during normal operation of the printer (the step of connecting is taught in the connection of the cable 5 to the printer 3 of Lin, the cable type is discussed in the rejection of claim 1 above); **and**

storing demonstration data in a memory (taught in the demonstration data of Farago being stored in the removable memory 13 of Lin as discussed in the rejection of claim 1); **and**

connecting the memory to the cable to enable the controller to read the demonstration data from the memory and format the data for the printer (shown in the insertion of removable flash memory 13 into the adaptive cable [ref. nos. 1, 4, 5]).

Regarding claim 12, which depends from claim 11, Lin further teaches that:

the controller has a computer interface (Fig. 2 ref. no. 20, wherein the interface engine interfaces to the computer as discussed in col. 3 lines 53-61) **and a memory interface** (Fig. 2 ref. no. 27, wherein DMA controller interfaces to the controller to access flash memory card data as discussed in col. 4 lines 13-19),

the computer interface is connected through the printer cable to the host computer during normal operation (shown in cable connection 4 which connects the adaptive cable to the computing unit 2 in Fig. 1), **and**

connecting the memory comprises connecting the memory through the cable to the memory interface (the insertion of the memory in the adaptive cable connects the memory to the cable and thus to the memory interface 27 through connections 16 & 17).

Regarding claim 13, which depends from claim 12 as it depends from clam 11, Lin teaches:

the computer interface implements a protocol for serial communication with the host computer (interface 20 is stated as a USB [protocol] Serial Interface Engine)**and**

the memory interface implements an interface for access in a non-volatile memory (memory 13 is Removable Flash Memory which is non-volatile).

Regarding claim 14, which depends from claim 13 as it depends from claims 12 and 11, Lin further teaches:

the computer interface implements the protocol required for connection to a universal serial bus (USB Serial Interface Engine 20), **and**

the memory interface implements accesses to a serial memory (Lin teaches the DMA controller 27 to also access the System Firmware Memory 12 which is implied to be a EPROM

as conventional to firmware through connection 17 which could also be an EEPROM as obvious to one of ordinary skill in the art).

Regarding claim 15, which depends from claim 12 as it depends from claim 11, Lin teaches that **the memory interface implements an interface for access in a non-volatile memory** (memory 13 is Removable Flash Memory which is non-volatile).

Claims 7 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin and Farago as applied to claims 1 – 6 and 10 – 15 above, and further in view of Wett (US 5872945).

Regarding claim 7, which depends from claim 1, Lin and Farago teach all of the limitations of parent claim 1.

While Lin teaches **a first mode wherein the controller boots from internal memory** (col. 4 lines 40-46 teach the internal firmware memory running the initialization program when the system is booted), Lin does not specifically teach **a second mode wherein the controller boots from the external memory.**

Wett teaches **a second mode wherein the controller boots from the external memory.** Col. 1 lines 48-50 teach a **boot mode where a self-contained processor system boots from an external memory;** abstract lines 17-20 teach two boot modes, with booting from an internal memory being the first, and booting from an external memory being the second; and col. 5 lines 61-65 further discuss boot modes from internal and external memories, wherein the signal INT/EXT 425 determines said boot mode.

Wett is analogous art to that of Lin and Farago because it is a self-contained processor system with a controller, internal memory, and external memory.

It would have been obvious to one of ordinary skill in the art to add the second boot mode of Wett into the external memory of the demonstration system of Lin and Farago. The motivation for doing so would have been to make the system for flexible and customizable. By adding the second boot mode, a demonstrator has more flexibility in accessing and changing the control of the adaptive cable controller because of being able to boot from different external memories, thus allowing the controller system to perform different types of demonstrations. Further, if a store chain had a specific mode they wanted the demonstration device to run in, the factory could still produce the devices the same, and the store chain could get bootable external memories to use for their specific purpose.

Regarding claim 8, which depends from claim 7, Wett further teaches **circuitry connected to the controller to cause the controller to operate only in the second mode.** Configuration data in memory 400 is circuitry that determines which mode the device is booted from (col. 5 lines 59-67). Thus, the configuration data can be set to cause the controller to operate only in the second mode.

Regarding claim 9, which depends from claim 7, Farago further teaches that **the external memory further comprises demonstration code that the controller executes.** Executable code is included to instruct the controller to perform formatting and sending of the data to the peripheral. This code is stored in programmable memory 1 of Farago shown in Fig. 1 along with other program code for controlling the printer demonstration as discussed in col. 2 lines 50-55.

(10) Response to Argument

Response to Appeal Brief Argument A

35 U.S.C. 103(a) rejections over Lin in view of Farago

With respect to Appellant remarks on pages 3 and 4 that neither Lin nor Farago suggests a "controller of a type employed in the cable that connects the peripheral to the host controller" and specifically (page 4) that Appellee interpretation of "host computer" is improper.

In reply, Appellee notes the following from MPEP § 2106 (II)(C):

> Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted "in view of the specification" without importing imitations from the specification into the claims unnecessarily). *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). See also *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) ("During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow.... The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.... An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process.").

Accordingly, Appellee looks to the specification for aid in the determination of what is the broadest reasonable interpretation of what Appellant is claiming by the term "host computer". Examiner notes the following about the "host computer" as described in the specification:

- "Host computer" is represented by box 110 in Fig. 1 and has a USB connector for connecting to a peripheral (Fig. 1 of Lin shows the same thing for the digital still camera [DSC] 2 connecting through a cable to USB printer 3).
- "Host computer" is described in the specification as

- having communications with the peripheral in the abstract and paragraph 8 (col. 1 lines 12-13 include communications).
- providing printer data to a peripheral in paragraphs 6, 14, and 21 (col. 1 lines 12-13 of Lin teach this, as further explained throughout).
- being replaceable with an EEPROM/non-volatile memory for downloading data from the memory instead of the host computer in paragraphs 7 and 13 (the DSC is replaceable by the memories 13 and/or 12 of the adaptor 1, e.g. col. 3 lines 22-29 and other areas cited above).

Further, if only deriving an interpretation from the claim, the "host computer" has one claimed function, to connect to a cable (which Lin shows in Fig. 1).

Further, to one of ordinary skill in the art, Appellee submits that a host computer would be recognized as any computing device that performs host-like functions. And since the specification of Appellant includes what host-like functions would be (providing printer data, communicating with a peripheral via a cable), and the DSC of Lin is a computing device that performs the host-like functions of Appellant, Appellee concludes that the limitation is met by Lin. Also, to one of ordinary skill in the relevant (printing) art, in a printing system with a printer and a cable, the connected host computer device provides the data to be printed by the printer. The camera of Lin (digital still camera 2) thus acts as a host computer by providing data to be printed by the printer (image data) as well as being connected to the cable 1.

Further, Appellant submits on page 4 that 'Applicants acknowledge that a camera can perform some (but not all) of the functions required of a host computer.' Appellant has not set forth in the claim or the claim in light of the specification any such functions that would preclude

the DSC of Lin from being a host computer and Appellant has concurred that the DSC of Lin is a computing device that can perform host-like functions.

Appellee submits that a reasonable interpretation of the claim language in light of the specification would lead one skilled or of ordinary skill in the art to know that a computing device such as a camera performing the functions of a host computer (including all the functions Appellant describes in the associated specification) could be read as a host computer as claimed in claim 1. Appellee thus believes that Lin and Farago teach the disputed limitation and the rejection should be sustained.

With respect to Appellant remarks on page 5 that Lin is not analogous art that one would look to as being related to a demonstration system for a printer.

Appellee submits that both Lin and Farago (as well as their combination) are inventions related to the printing art, and thus analogous in art to each other and to Appellant's claimed invention. Lin and Farago are clearly both in the printer art, as well as both in the art specifically relating to connecting independent control devices up to printers for specific printing purposes (1 in Lin and 12 in Farago). They also both provide small devices that perform the tasks that were previously performed by larger systems.

The system of Lin can perform demonstrations without the DSC 2 by printing image data from the removable DSC flash memory. Thus, a demonstration could be performed by just printing whatever image data was on hand. The reason that Lin is combined with Farago is that Farago specifically teaches not only printing image data, but demonstration data of a type

specifically suited for demonstrating the abilities of a printer. Thus, the system of Lin could not only print demonstrations with image data, but also with print data specifically designed for demonstrations. Also, because Farago teaches coupon printing, it would have further been obvious to one of ordinary skill in the art that a user would want to be able to print coupons for various types of items. Further, Farago is even more specifically related to Appellant's art by specifically providing a demonstration printing system.

Appellee submits that both Lin and Farago are analogous to each other and to the Appellant's field of endeavor and the rejection be sustained.

Response to Appeal Brief Argument B

35 U.S.C. 103(a) rejections over Lin in view of Farago and further in view of Wett

With respect to Appellant remarks on pages 6 and 7 that the combination fails to disclose or suggest a motivation for using a controller having alternative boot modes in a demonstration system.

In reply, it would have been obvious to one of ordinary skill in the art to add the second boot mode of Wett into the external memory of the demonstration system of Lin and Farago. The motivation for doing so would have been to make the system for flexible and customizable. By adding the second boot mode, a demonstrator has more flexibility in accessing and changing the control of the adaptive cable controller because of being able to boot from different external memories, thus allowing the controller system to perform different types of demonstrations. Further, if a store chain had a specific mode they wanted the demonstration device to run in, the factory could still produce the devices the same, and the store chain could get bootable external

memories to use for their specific purpose. Thus, in the system of Lin and Farago, the adaptor 1 does not only have to boot from firmware memory 12 but can boot from possibly removable flash memory 13. Thus, any boot mode that a user would want to place the print controlling device in would be possible by providing a flash memory with boot mode code on it to boot the system in the preferred way and thus the system would not have to rely on one standard booting sequence or booting mode. This flexibility would give the system of Lin and Farago more ease of use and customizability to its users. Appellee thus shows that one of ordinary skill in the art would be motivated to make such a combination and believes that the rejection should be sustained.

With respect to Appellant remarks on page 7 that the combination fails to suggest a demonstration system using a controller having two boot modes and then only permitting operation in one of the boot modes.

In reply, by giving the user more options on how to boot a device, especially externally wherein any boot mode could be used, creates a more flexible and customizable system. Appellee has expounded in previous argument that the external boot mode when combined with Lin and Farago would be booting from the removable flash memory for the motivations listed above. In such a system the adaptor would not, and probably could not, boot from both modes at once, thus only permitting the boot in one of the modes is natural to select how the device will boot. Further, Wett teaches (col. 1 lines 35-38) that the second boot mode would be desirable because it fixes the difficulty issues of accessing a device externally and for a user that would like to access the system for operational or debugging purposes. Appellee thus shows that one of

ordinary skill in the art would be motivated to make such a combination and believes that the rejection should be sustained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Lucas J. Divine

12/21/2005

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